

Title (en)
LUBRICATING OIL COMPOSITION

Title (de)
SCHMIERÖLZUSAMMENSETZUNG

Title (fr)
COMPOSITION D'HUILE LUBRIFIANTE

Publication
EP 3109299 A4 20171018 (EN)

Application
EP 15748821 A 20150216

Priority
• JP 2014027765 A 20140217
• JP 2015054187 W 20150216

Abstract (en)
[origin: EP3109299A1] A lubricating oil composition includes: a lubricating base oil; a component (A) that is a metal detergent having a base value of less than 100 mgKOH/g; a component (B) that is a metal detergent having a base value of 100 mgKOH/g or more; a component (C) that is a tertiary amine represented by a formula (1) below, in which R 1 is a hydrocarbon group having 4 carbon atoms or more, and R 2 and R 3 each are a hydrocarbon group having 4 carbon atoms or less; and a component (D) that is at least one of acid phosphate and acid phosphite.

IPC 8 full level
C10M 129/10 (2006.01); **C10M 129/54** (2006.01); **C10M 133/04** (2006.01); **C10M 135/10** (2006.01); **C10M 137/02** (2006.01); **C10M 137/04** (2006.01); **C10M 159/20** (2006.01); **C10M 159/22** (2006.01); **C10M 159/24** (2006.01); **C10M 163/00** (2006.01); **C10N 10/04** (2006.01); **C10N 20/00** (2006.01); **C10N 30/00** (2006.01); **C10N 40/04** (2006.01)

CPC (source: EP US)
C10M 163/00 (2013.01 - EP US); **C10M 2203/1006** (2013.01 - US); **C10M 2203/1025** (2013.01 - EP US); **C10M 2207/027** (2013.01 - EP US); **C10M 2207/028** (2013.01 - EP US); **C10M 2207/144** (2013.01 - EP US); **C10M 2207/262** (2013.01 - EP US); **C10M 2209/084** (2013.01 - EP US); **C10M 2215/02** (2013.01 - EP US); **C10M 2215/04** (2013.01 - US); **C10M 2219/044** (2013.01 - EP US); **C10M 2219/046** (2013.01 - EP US); **C10M 2219/106** (2013.01 - EP US); **C10M 2223/04** (2013.01 - EP US); **C10M 2223/041** (2013.01 - EP US); **C10M 2223/047** (2013.01 - EP US); **C10M 2223/049** (2013.01 - EP US); **C10M 2229/02** (2013.01 - EP US); **C10N 2010/04** (2013.01 - EP US); **C10N 2030/02** (2013.01 - US); **C10N 2030/06** (2013.01 - US); **C10N 2030/18** (2013.01 - US); **C10N 2030/52** (2020.05 - EP US); **C10N 2040/04** (2013.01 - EP US); **C10N 2040/045** (2020.05 - EP US)

Citation (search report)
• No further relevant documents disclosed
• See references of WO 2015122525A1

Cited by
EP3872151A4; US11535808B2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3109299 A1 20161228; **EP 3109299 A4 20171018**; **EP 3109299 B1 20190612**; CN 105980535 A 20160928; CN 105980535 B 20190719; JP 2015151490 A 20150824; US 10011802 B2 20180703; US 2017051228 A1 20170223; WO 2015122525 A1 20150820

DOCDB simple family (application)
EP 15748821 A 20150216; CN 201580008636 A 20150216; JP 2014027765 A 20140217; JP 2015054187 W 20150216; US 201515119568 A 20150216